

BRANDON BAKR

bwb0007@auburn.edu

Auburn, AL

EDUCATION

Auburn University, Auburn, AL

Bachelor of Science in Chemistry, Minor in Mathematics; May 2013

G.P.A. 3.6/4.0

RESEARCH

Accurate Potentials for the Helium-H₂ Dimer

Summer 2012-Present

- Develop improved potential energy surface for He-H₂ dimer
- Use Coupled-Cluster Theory and Full Configuration Interaction
- Advised by Dr. Konrad Patkowski, Auburn University Chemistry

Fair Dice from a Geometric Perspective

Summer 2011-Spring 2012

- Developed a mathematical approach to classify fair dice
- Presented at COSAM Leadership Council Meeting (September 2011)
- Presented at Auburn Undergraduate Research Forum (April 2012)
- Advised by Dr. András Bezdek, Auburn University Mathematics & Statistics

HONORS

President of Math Club

2012-Present

Treasurer of Math Club

2011-2012

COSAM Undergraduate Research Fellow

2011-2012

Dean's List

Fall 2009, 2012 Spring 2010, 2012

Auburn University Honors College Student

Auburn University Founder's Scholarship

EXPERIENCE

Mathematics Tutor

Spring 2011-Present

- Teach three hour class-styled sessions for around 15 students twice-weekly
- Cover Pre-Calculus, Business Calculus I & II, and Calculus I,II,& III
- Hired by Auburn University Mathematics & Statistics

Chemical Teaching Assistant

Fall 2012

- Instruct 50 person General Chemistry Labs weekly at Auburn University
- Assist first-time chemistry students in running experiments
- Hired by Auburn University Chemistry

Laboratory Technician

Summer 2012

- Tested and improved all new Inorganic Chemistry I Labs
- Logged over 290 hours of lab time for Dr. Krishans Raghuveer
- Hired by Auburn University Chemistry

Mathematical Teaching Assistant

Fall 2010-Fall 2011

- Assisted in four Algebra/Pre-Calculus courses at Auburn University
- Explained concepts to students in need during class sessions
- Hired by Auburn University Mathematics & Statistics

General Tutor

Spring 2008-Spring 2009

- Tutored middle and high school students four days per week in all subjects
- Hired by Southeast Alabama Educational Outreach in Dothan, AL